NFAC/CAR

NFAC # 4325-78

25 September 1978

MEMORANDUM FOR: Associate Director-Management, NFAC

STATINTL

FROM : [redacted]
Chief, Support Services Division
Office of Central Reference

SUBJECT : Request to Teach Course at Institution of Higher Education

1. Pursuant to NFAC Notice 50-2 (dated 11 September 1978) I request approval to teach a data processing course at:

Northern Virginia Community College (NVCC)
8333 Little River Turnpike
Annandale, VA 22003

2. I am scheduled to teach the following course during the Fall 1978 quarter (beginning 27 September 1978):

| Course No. | Course Title |
|---|---|
| DAPR-269-02N | Computer Programming-370 Assembler Language |

The course will meet on Tuesday and Thursday evenings 1900 to 2120. Data Processing courses are supervised by Mr. K. Swanson and fall within the curricula offered by the Business Division (chaired by Mr. William C. Hill).

3. I have been a part-time faculty member (with the title of Lecturer) with NVCC for several years, and have taught a variety of data processing courses during this time. An Outside Activity Request was approved for this activity several years ago.

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4. NVCC is aware of my association with CIA. Neither my lectures or class exercises refer or pertain to CIA activities, nor does my association with NVCC interfere with my Agency duties and responsibilities.

[redacted]

Attachment:
Course Outline and Syllabus

STATINTL

*I have reviewed this activity and found it to be unclassified.*

STATINTL [redacted]
Chief, Document Services Group

CONCUR:

STATINTL [redacted]
Director of Central Reference — Date

[redacted]
Director of Security — 2 OCT 1978 Date

STATINTL [redacted]
Coordinator for Academic Relations — 3 OCT 1978 Date





OS 8 2657

SUBJECT: Request to Teach Course at Institution of Higher Education

STATINTL APPROVED:

[redacted]

Associate Director-Management, NFAC

9 OCT 1978

Date

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STATINTL

27 SEP 1978

TO : All Students, DAPR-269-02N

SUBJECT: Course Outline

1. This course is intended to introduce the student to the IBM 360-370 Assembler Language. Upon completion of the course the student should be capable of designing, coding, executing, and debugging simple Assembler Language Programs using standard and decimal instructions. The student will also acquire an understanding of the hexademimal structure of the IBM 360/370 system, machine language formats, assembler operand and field formats, and the manner of defining symbols and data to the computer.

2. The attached outline is intended to serve as a guide for the classroom events over the next eleven weeks. Neither the sequence of topics nor the dates scheduled are fixed, however, as certain course topics may be pursued to the extent necessary for proper coverage.

3. Textbook for the course is:

Overbeek and Singletary, *Assembler Language with ASSIST*, Chicago: SRA: Inc., 1976

Supporting reference texts are:

IBM Systems OS/VS - DOS/VS - VM/370 Assembler Language (GC33-4010)
IBM System/370 Principles of Operation (GA22-7000)

The IBM 360 equivalent of either manual (IBM reference numbers GC28-6514 and GA22-6821 respectively) are also satisfactory. Copies of the reference texts will be placed on reserve in the campus library and be available in the remote terminal center. Home reading assignments are listed on the attached schedule. Additional assignments or problems will be assigned in the progress of the course.

4. There will be approximately three quizzes on material covered in class or reading assignments. There will be no mid-term exams although you will be graded on the writing of three programs that will

SUBJECT: Course Outline

be required of you. Completed programming assignments will consist of a flow-chart, assembler listings (appropriately documented) and test results. Approximate weighting of assignments will be:

| | |
|---|---|
| Quizzes | 30% |
| Assigned programs | 30% |
| Final exam* | 30% |
| Class participation | 10% |

*Final exam will be "open book"

5. If you have any questions on your assignments you may call me after 6 p.m. on 323-0320.

STATINTL

[redacted]

(Instructor)

Attachment:
As stated

(ATTACHMENT)

CLASS SYLLABUS

DAPR-269 - Computer Programming - (360/370 Assembler Language)

| DATE | LECTURE TOPICS | MNEMONICS | TEST READING ASSIGNMENT |
|---|---|---|---|
| 28 Sep | Administrative Procedures<br>Overview of Course Outline and Text<br>Review of 360/370 Characteristics<br>Introduction to ALC | | |
| 3, 5 Oct | Number Systems<br>Data representation and instruction formats | | Review Chapter 1 |
| 10, 12 Oct | Overview of 360 Addressing Techniques<br>Coding forms<br>Program organization<br>(Quiz #1: 12 Oct) | START<br>CSECT<br>END | Preview: 2.1 - 2.6<br>4.1 - 4.5 |
| 17, 19 Oct | Data movement, comparing and branching<br>Relative addressing<br>Length attributes<br>Extended mnemonics | MVC/MVI<br>CLC/CLI<br>BC | Preview 6.2<br>Study Chapter 2 (esp. 2.7 - 2.12) |
| 24, 26 Oct | Defining storage and constants<br>Base and displacement addressing<br>Explicit addressing<br>I/O with ASSIST | DS<br>DC<br>BALR<br>USING<br>XREAD/XPRNT | Preview 4.1 - 4.3 |
| 31 Oct<br>2 Nov | Converting data forms<br>Literals<br>Fixed point arithmetic (addition, subtraction)<br>Two's complement notation<br>(Quiz #2: 31 Oct) | PACK/UNPK<br>CVD/CVB<br>ST/STH/L/LH/STM/LM<br>A/AH/AR<br>LR | Study Chapter 3 |
| 7, 9 Nov | Fixed point arithmetic (multiplying & dividing)<br>Algebraic comparison<br>Abnormal Ending (ABEND)<br>"ASSIST" Instructions<br><br>(Program #1 Due: 9 Nov) | M/MH/MR<br>D/DR/SRDA<br>C/CH/CR<br>MVZ | Study Chapter 4<br>Review Chapter 6 |

| DATE | LECTURE TOPICS | MNEMONICS | TEXT READING ASSIGNMENT |
|---|---|---|---|
| 14, 16 Nov | Looping and Indexing<br>Packed decimal arithmetic | BXLE/BXH<br>BCT<br>LA<br>ZAP/AP/SP | Study Chapter 7<br>(esp. 7.1 - 7.6) |
| 21 Nov | Packed decimal arithmetic<br>Indexing with SS instructions<br>Table Look-ups | EQU<br>MP/DP/CP<br>CP | |
| 23 Nov | THANKSGIVING HOLIDAY | | |
| 28, 30 Nov | Packed decimal arithmetic<br>Shifting of decimal places<br>Techniques of modular programming<br>(Quiz #3: 28 Nov)<br><br>(Program #2 Due: 30 Nov) | MVN<br>MVO<br>BAL/BALR | |
| 5, 7 Dec | Program switches<br>Shifts, algebraic + logical<br>Logical Operations | IC/STC<br>SLDA/SLA<br>SLDL/SLL<br>SRDA/SRA<br>SRL/SRDL<br>N/NI/NC/NR<br>O/IO/OC/OR<br>TM | Study Chapter 5 |
| 12 Dec | Editing<br>Review<br><br>(Program #3 Due: 12 Dec) | ED/EDMK | Review 7.7 - 7.8 |
| 14 Dec | FINAL EXAM | | |